

# Capturing Variables Indicating Driver Distraction in Large Electronic Files

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July 18, 2000

# Distractions While Driving Include:

- Adjusting Ones Tie or Putting on Makeup
- Making a Cell Phone Call
- Radios, CD Players, Tape Decks
- FAX Machines
- Computers
- Children

# Distractions While Driving Include Continued:

- Combing Hair
- On Board Navigation Systems
- Shaving
- Two-Way Radios
- Heads-up Displays

# Distraction Data are Captured in Three Large Electronic Files

- (FARS) Fatality Analysis Reporting System
- (NASS) National Automotive Sampling System
  - (/GES) General Estimates System
  - (/CDS) Crashworthiness Data System

# (FARS) Fatality Analysis Reporting System

- A Census of All Crashes on Public Roadways with a Death Occurring within 30 Days of the Crash
- Established 1975
- Based on Police Accident Reports
- A National Treasure

# Distractions can be Partitioned

- Non-Technological Distractions
  - Have Always Existed
- Technological Distractions
  - New Distractions Mostly Occurring Since 1990

# Non-Technological Distractions Include

- Personal Grooming
- Radios, CD Players, Tape Decks
- Children
- Conversations

# Technological Distractions Include

- Making a Cell Phone Call
- FAX Machines, Computers
- On Board Navigation Systems
- Two-Way Radios
- Heads-up Displays



# FARS Does *NOT* Collect data on Non-Technological Distractions

- Major Question
  - Are There More Non-Technological Distractions than Technological Distractions?
- Answer
  - We Don't Know!
  - National Data are not being Collected

# FARS Collects data on Technological Distractions (Since 1991)

- However:
- FARS is based on Police Accident Reports (PARs)
- PARs often do *not* Report Technological Distractions

# The Instances of Reports of Technological Distractions have Increased Since 1991 (FARS)

- 1991 20 Reports out of 54,795 Drivers
- 1994 37 Reports out of 54,911 Drivers
- 1997 69 Reports out of 57,060 Drivers (The All Time High)

# 1998 Technological Distraction Reports in FARS

- 64 Reports out of 56,865 Drivers
- 33 of the 64 were from Oklahoma
- 7 of the 64 were from California
- 31 of the 50 States and the District of Columbia did not Report Any Distractions

# 2 States Specifically Collect Data on Cell Phone Usage

- Oklahoma
  - Has several Dedicated Fields
- Minnesota
  - Have two Shared Fields, Contributing Factors, with 29 Other Possibilities

# Oklahoma Results 1998

- 33 Reports out of 988 Drivers
  - Which is 52% of all Reports from all States
  - Which is 3.3% of Oklahoma Drivers

# Oklahoma Results Concerns

- Can *NOT* Determine if the Cell Phone Call was Made:
  - Before the Crash
  - At the time of the Crash
  - After the Crash.

“The absence of evidence is not the same as the evidence of absence.”

Carl Sagan



# What is Needed in Data Collection in Fatal Crashes?

- Accuracy
- Reliability
- Uniformity
- Police Training

# GOOD NEWS

- Guideline for Minimum Uniform Crash Criteria (MUCC)
  - DOT HS 808 662, §P14, Pages 45-46
  - Recommends that the States Collect Data on Driver Distractions

# NASS/GES

- A Probability Sample Survey of 55,000 Police Reported Crashes
- Based on Police Accident Reports
- Problems Similar to FARS with the Additional Complication of a Survey rather than a Census

# NASS/CDS

- A Probability Sample Survey of Towed Passenger Vehicles
  - Crashes are Investigated by 24 teams of Trained Crash Researchers
  - Most Detailed of the Electronic Files
  - Oversamples Newer Vehicles

# NASS/CDS Data Collection

- Driver Distraction Information Collected Since 1995
- 17,870 Unweighted Crashes (1995-1998)
- 10,646,773 Weighted Crashes

# NASS CDS Distractions

- Looked, but did not see (Considered with Distractions for Computational Purposes)
- By Other Things in Vehicle
  - By Other Occupant(s)
  - By Moving Object in Vehicle

# NASS CDS Distractions (continued)

- Cellular Phone Related (Location and Phone Type Specified)
  - While Talking or Listening to Cellular Phone
  - While Dialing Cellular Phone
- Using Devices/Controls
  - While Adjusting Climate Controls

# NASS CDS Distractions (continued)

- While Using or Reaching for Device or Object Brought into Vehicle
- **Sleepy or Fell Asleep**
- Distracted by Outside Person, Object, or Event
- Eating, Drinking, or Smoking



# NASS CDS Distractions 1995-1998 Weighted Data

- All Crashes
  - 14% Crashes Involved Distractions
  - 8% Crashes Drivers “Looked, But Did Not See”
  - 51% Crashes did not Involve Distractions
  - 28% Crashes Information Unknown

# NASS CDS Distractions 1995-1998 Weighted Data

- Unknowns Distributed
- 20% - 30% Crashes Involved Distractions